Amendments to the Claims

The following listing of claims replaces all prior versions of the claims and all prior listings of the claims in the present application.

Claims 1-10 (canceled)

Claim 11 (currently amended): A method of processing polymer-based mixtures and compounds in a closed mixer, wherein the mixer comprises:

a mixing chamber;

a pair of rotors; and

a pressing ram;

wherein the pressing ram is movable between a resting condition, which allows introduction of material into the mixing chamber, and a working condition, [[and]]

wherein the method comprises:

introducing the material into the mixing chamber;

moving the pressing ram from the resting condition to an upper end-of-stroke position; and

moving the pressing ram from the upper end-of-stroke position to a lower end-of-stroke position;

wherein a position-time profile of the pressing ram is controlled during moving the pressing ram from the upper end-of-stroke position to the lower end-of-stroke position so that

mixing of the material is completed as the pressing ram reaches the lower end-of-stroke position, and

wherein the mixing of the material is completed when substantially all aggregates of the material comprise an average diameter less than or equal to 50 μm.

Claim 12 (previously presented): The method of claim 11, wherein control of the position-time profile of the pressing ram is initiated when the pressing ram contacts the material.

Claim 13 (previously presented): The method of claim 11, wherein the position-time profile of the pressing ram is controlled by regulating a control pressure of the pressing ram to follow a predetermined reference position-time profile.

Claim 14 (previously presented): The method of claim 11, wherein moving the pressing ram from the resting condition to the upper end-of-stroke position is preceded by introducing into the mixing chamber at least one reinforcing filler of a polymer base, and

wherein moving the pressing ram from the upper end-of-stroke position to the lower end-of-stroke position occurs during incorporation of the at least one reinforcing filler into the polymer base.

Claim 15 (previously presented): The method of claim 14, wherein the pressing ram reaches the lower end-of-stroke position at an end of incorporation of the at least one reinforcing filler into the polymer base.

Claim 16 (previously presented): The method of claim 15, wherein plasticizers of the polymer base are introduced into the mixing chamber after the pressing ram has reached the lower end-of-stroke position.

Claim 17 (previously presented): The method of claim 14, wherein the at least one reinforcing filler of the polymer base comprises one or more of carbon black and silica.

Claim 18 (previously presented): The method of claim 11, wherein the position-time profile of the pressing ram is a direct processing parameter.

Claim 19 (previously presented): The method of claim 11, wherein the material introduced into the mixing chamber comprises a crosslinking system for a polymer-based mixture.

Claim 20 (previously presented): The method of claim 11, wherein the material introduced into the mixing chamber comprises a mixture.

Claim 21 (previously presented): The method of claim 11, wherein the position-time profile is predetermined.

Claim 22 (previously presented): The method of claim 11, wherein, during moving the pressing ram from the upper end-of-stroke position to the lower end-of-stroke position, motion of

the pressing ram is subject to oscillations caused by effects of rotation of the rotors on the material.

Amendments to the Drawings

The attached sheets of drawings improve the readability of the figure numbers of Figs. 1-3 and amend the figure numbers of Figs. 6 and 7 to read "Fig. 6" and "Fig. 7", respectively.

Attachments: Five (5) Replacement Sheets (Figs. 1-3, 6, and 7)